

**SERIAL NO. 09/620,469****DOCKET NO. 1293.1132**

By way of review, the Examiner asserts that, in order to record data on the third recording layer 8, the recording beam must first record data on the first and second recording layers 4, 6. However, even assuming *arguendo* that the Examiner is correct, the Examiner does not assert, and Miyauchi et al. does not suggest, that a reproducing beam, which reproduces the data as opposed to records data, also has the same effect with regard to the first and second recording layers 4, 6.

Moreover, consistent with the applicants' arguments, it is noted that the Examiner on page 3 of the Office Action asserts that the phase change recording layers of Miyauchi et al. are stable during reproduction using a reading light. Further, the Examiner acknowledges that the phase change recording layers do not undergo a physical/crystalline phase change when irradiated with the reading light. Therefore, even assuming *arguendo* that the reading beam changes phases while passing through the recording layers as asserted by the Examiner, there is no disclosure that the recording layers undergo a phase change due to the reading beam.

Lastly, the Examiner asserts on page 3 of the Office Action that the phase change occurs in the reading light passing through a portion of the phase change recording layer 4 which has undergone a physical/crystalline change during recording such that a phase change exists in the reading light between bit and non-bit areas. However, even assuming *arguendo* such a phase change occurs in the reading light, it is noted that the change in phase of the reading light is not disclosed as preventing portions of the reading light reflected from one of the recording layers 6, 8 from passing through an area of the recording layer 4 that has undergone a physical/crystalline phase change during recording.

In contrast, claim 1 recites, among other features, "*the irradiation with the reproducing beam of said phase control layer within the laser spot causes a phase difference due to one of the two areas changing between a crystal and an amorphous phase that alters an optical path of the reproducing beam reflected from said phase change recording layer so as to prevent portions of the reproducing beam reflected from said phase change recording layer from passing*

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through the one area that has converted between the crystalline and the amorphous state." Therefore, it is respectfully submitted that the effect described in Miyauchi et al., which is drawn to recording using a recording beam, does not disclose or suggest the invention recited in claim 1.

For similar reasons, it is respectfully submitted that Miyauchi et al. does not disclose the invention recited in claims 18 and 21.

Claims 2, 9-11, 14-17, 19, and 20 are deemed patentable due at least to their depending from corresponding claims 1 and 18.

2. Rejection in view of Ichihara

In the Office Action at pages 3-4, the Examiner rejects claims 1-3, 6, 9-11, and 14-21 under 35 U.S.C. § 102(e) in view of Ichihara (U.S. Patent No. 6,181,650). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Ichihara discloses a super resolution film 23 having a low transmissivity at ambient temperature, and a high transmissivity at a higher temperature as shown in FIG. 3. As such, during reproduction, a reproduction beam heats the super resolution film 23 to produce an aperture A as shown in FIG. 1. For the portion of the light spot Sr of the reproduction beam incident on a portion of the super resolution film 23 that has not yet been heated to the high temperature (i.e., the left side of the graph in FIG. 3), the light does not reach the recording layer 25. Once heated to the high temperature due to prolonged exposure to the reproduction beam (i.e., the right side of the graph in FIG. 3), the aperture A forms in the super resolution film 23 and those portions of the light spot Sr incident on the aperture A are able to pass through the super resolution film 23 to reproduce data with respect to the data  $M_{i,j}$  recorded on the recording layer 25. In order to close the aperture A, an initialization beam can be used such that, during the next rotation, the aperture A does not remain open so as to allow lower resolution over time. (Col. 12, lines 1-37, col. 13, lines 4-36; FIGs. 1, 3, 15, 16 of Ichihara).

On page 4 of the Office Action, the Examiner asserts that the applicants have ignored

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the effect of the super resolution layer. However, it is respectfully submitted that the super resolution film 23 produces an aperture A in a different location than that recited in claim 1. Specifically, since the portions of the light spot Sr not within the aperture A are incident on a low transmittance area of the super resolution film 23, the super resolution film 23 acts to prevent the light beam from being incident on the recording layer 14. Therefore, the super resolution film 23 does not prevent light already received at the recording layer 25 from passing back through the super resolution film 23, and instead prevents light from being received at the recording layer 25 unless the light is within the aperture A.

In contrast, claim 1 recites, among other features, "a phase difference due to one of the two areas changing between a crystal and an amorphous phase that alters an optical path of the *reproducing beam reflected from said phase change recording layer* so as to prevent portions of the *reproducing beam reflected from said phase change recording layer* from passing through the one area that has converted between the crystalline and the amorphous state." As such, it is respectfully submitted that Ichihara does not disclose the invention recited in claim 1.

For similar reasons, it is respectfully submitted that Ichihara does not disclose the invention recited in claims 18 and 21.

Claims 2, 3, 6, 9-11, 14-17, 19, and 20 are deemed patentable due at least to their depending from corresponding claims 1 and 18.

**REJECTION UNDER 35 U.S.C. §103:**

In the Office Action at pages 4-5, the Examiner rejects claims 1-3, 5, 6, 9-11, and 13-21 under 35 U.S.C. §103 in view of Miyauchi et al. or Ichihara in view of Yamada et al. (U.S. Patent No. 5,255,260) and Kikukawa et al. (U.S. Patent No. 6,329,036). This rejection is respectfully traversed and reconsideration is requested.

The Examiner asserts that Yamada et al. discloses different materials usable as phase change recording media and as reflective layer materials, and Kikukawa et al. teaches a mask

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material, but not as otherwise curing the above noted deficiencies of Miyauchi et al. or Ichihara as applied to claims 1, 18, and 21. As such, assuming arguendo that the Examiner is correct as to the disclosures of Yamada et al. and Kikukawa et al., it is respectfully submitted that the combinations of Miyauchi et al. or Ichihara in view of Yamada et al. and Kikukawa et al. does not disclose or suggest the inventions recited in claims 1, 18, and 21.

Claims 2, 3, 5, 6, 9-11, 13-17, 19, and 20 are deemed patentable due at least to their depending from corresponding claims 1 and 18.

**STATUS OF CLAIM NOT REJECTED:**

On page 5 of the Office Action, the Examiner objects to claim 8 as depending from a rejected base claim.

**CONCLUSION:**

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.


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If there are any additional fees associated with the filing of this Response, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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